



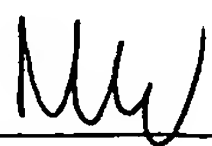
# UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,580	12/20/2001	Brian R. Janes	01-659US	3268
719	7590	12/02/2004	EXAMINER	
CATERPILLAR INC. 100 N.E. ADAMS STREET PATENT DEPT. PEORIA, IL 616296490			LOWE, MICHAEL S	
			ART UNIT	PAPER NUMBER
			3652	

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/028,580		JANES ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
M. Scott Lowe		3652		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 9/10/04.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-48 is/are pending in the application.
- 4a) Of the above claim(s) 36-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-35,47 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/22/04, 8/12/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

***Information Disclosure Statement***

The information disclosure statement filed 10/22/04 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the foreign patent documents were not provided. Although there is a document that states that the foreign references teach the claimed invention, the references still must be submitted. It has been placed in the application file, but the foreign reference information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 47-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant stated that these claims had

Art Unit: 3652

support on pages 8-9 of the specification but no mention of pressure fitting was found there.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-10, 13-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Liston (US 5,503,234).

Re claims 1, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising:  
at least one first load bearing member 10 (various) structured and arranged for coupling to the  
platform 80;  
a second load bearing member 10 (various) having an end comprising a material having a first yield strength;

Art Unit: 3652

an aperture 70,54 formed in said end and having an aperture wall; at least one support member 56 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing; and said support member 56 having a second yield strength. Walth is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Liston to have the second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claims 5, Walth teaches load bearing arrangement wherein said member 10 comprises:

- at least one top plate 16;
- at least one bottom plate 18; and
- at least one pair of spaced apart side plates 20, 21 each attached to said top plate 16 and said bottom plate 18.

Re claims 6, Walth teaches load bearing arrangement wherein said top plate comprises at least one integral mounting structure (not numbered but shown on figures 2-4).

Re claims 7, Walth teaches a load bearing arrangement comprising a substantially cylindrical attachment structure 50, 56 extending from at least one said side wall; and wherein said side wall is attached to said attachment structure 50, 56.

Re claims 8, Walth teaches a load bearing arrangement wherein said member 10 has a transverse width; and said attachment structure 50, 56 spans said transverse width.

Re claims 9, Walth teaches a load bearing arrangement further comprising at least one reinforcing structure (30, 26 or 42 by way of 30,26) attached by to at least one said side plate 20, 21.

Re claims 10, Walth teaches a load bearing arrangement wherein said reinforcing structure comprises a base portion (not numbered); and a rib portion (not numbered) extending from said base portion.

Re claims 13, 14, Walth teaches a pivotally connected attachment bucket 82.

Claims 4, 11,17-20,47,48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Liston (US 5,503,234) and further in view of El Wakil ("Processes and Design for Manufacturing").

Re claims 4,11,20,48, Walth teaches items connected together but is silent on laser welding. El Wakil teaches (pages 85-87) laser welding as a versatile means of connecting items without causing excessive heat related problems (page 86). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil to use laser welding in order to have a versatile means of connecting items without causing excessive heat related problems.

Re claims 17,47, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising:

Art Unit: 3652

at least one load bearing member 10 structured and arranged for coupling to the platform 80;

said load bearing member 10 having an end comprising a material having a first yield strength;

an aperture 70,54 formed in said end and having an aperture wall; at least one support member 56 contained within said aperture adjacent to at least a portion of said aperture wall, said support member having an opening sized to receive a bearing; and

said support member 56 having a second yield strength. Walth is silent on the whether the second yield strength is greater than said first yield strength. However, Liston teaches bearing sections having higher yield strength in order to improve performance and durability. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by Liston to have the second yield strength be greater than said first yield strength in order to improve performance and durability.

Re claim 18, Walth teaches the load bearing arrangement wherein said support member 56 comprises a substantially cylindrical structure having a through opening.

Re claim 19, Walth teaches load bearing arrangement further comprising a bearing 56 received in said opening.

Claims 15,16,21-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Walth et al (US 6,158,949) in view of Westbroek (US 6,060,682) and further in view of El Wakil ("Processes and Design for Manufacturing").



Art Unit: 3652

Re claims 15, Walth teaches a load bearing arrangement for use with a work machine of the type having a platform 80, comprising a plurality of pieces connectable to form a member 10 structured and arranged for pivotable attachment to the platform; a weldment (columns 3-4, etc.) connecting at least two of said pieces. Walth is silent on weldments being simulated for effects of heat on at least one of said pieces subject to said weldment. However, El Wakil (pages 71-73,87-91) teaches weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the strength of the welded structure. Westbroek teaches (column 1) that weldment design and simulations are done prior actual construction in order to assure strong welds. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil and Westbroek to have weldments being simulated for effects of heat in order prior to construction to choose the correct type of weld and to insure the strength of the welded structure.

Re claims 16, 35, Walth as modified teaches said effects being at least one of stress and deformation.

Re claim 27, Walth teaches items connected together but is silent on laser welding. El Wakil teaches (pages 85-87) laser welding as a versatile means of connecting items without causing excessive heat related problems (page 86). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil to use laser welding in order to have a versatile means of connecting items without causing excessive heat related problems.



Re claim 21, Walth teaches load bearing arrangement wherein said member 10 comprises:

- at least one top plate 16;
- at least one bottom plate 18; and
- at least one pair of spaced apart side plates 20, 21 each attached to said top plate 16 and said bottom plate 18.

Re claim 22, Walth teaches load bearing arrangement wherein said top plate comprises at least one integral mounting structure (not numbered but shown on figures 2-4).

Re claim 23, Walth teaches a load bearing arrangement comprising a substantially cylindrical attachment structure 50, 56 extending from at least one said side wall; and wherein said side wall is attached to said attachment structure 50, 56.

Re claim 24, Walth teaches a load bearing arrangement wherein said member 10 has a transverse width; and said attachment structure 50, 56 spans said transverse width.

Re claim 25, Walth teaches a load bearing arrangement further comprising at least one reinforcing structure (30, 26 or 42 by way of 30,26) attached by to at least one said side plate 20, 21.

Re claim 26, Walth teaches a load bearing arrangement wherein said reinforcing structure comprises a base portion (not numbered); and a rib portion (not numbered) extending from said base portion.

Re claim 28, Westbrook teaches (figure 6, column 1, lines 9-15) a load bearing arrangement for use with a work machine of the type having a platform, comprising: a load bearing member comprises a first side and a second side; one of said first side or said second side comprises a plurality of side plates 12c, 14c; each said side plate having a centerline axis; and at least two adjacent side plates, each having a different thickness, on one of said first side or said second side are coupled together such that said centerline axis of each said side plate 12c, 14c are collinear.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by the teaching of Westbrook to have the sides made of adjacent plates coupled together on collinear centerlines in order to improve strength and to conform with standard manufacturing practice (column 1, Westbrook).

Re claims 29, 30, 33, 34, Walth teaches a pivotally connected attachment bucket 82.

Re claim 31, Walth teaches a load bearing apparatus, comprising: a work machine having a platform 80; a first member 10, having a longitudinal axis, coupled to said platform 80; a first movement means (not numbered) for moving said first member 10 relative to said platform; a second member 68, having a longitudinal axis, pivotally coupled to said first member 10; a second movement means (not numbered) for moving said second member 68 relative to said first member 10; a plurality of pieces connectable to form at least one of said first and second members; a weldment

Art Unit: 3652

connecting at least two of said pieces. Walth is silent on weldments being simulated for effects of heat on at least one of said pieces subject to said weldment. However, Wakil (pages 71-73,87-91) teaches weldments being simulated for effects of heat in order to choose the correct type of weld and to insure the strength of the welded structure.

Westbroek teaches (column 1) that weldment design and simulations are done prior actual construction in order to assure strong welds. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by El Wakil and Westbroek to have weldments being simulated for effects of heat prior to construction in order to choose the correct type of weld and to insure the strength of the welded structure.

Re claim 32, Walth teaches first and said second movement means comprises hydraulic cylinders.

Claim 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Westbroek (US 6,060,682) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Walth 6,158,949) in view of Westbroek (US 6,060,682).

Re claim 12, Westbroek teaches (figure 6, column 1, lines 9-15) a load bearing arrangement for use with a work machine of the type having a platform, comprising: at least one load bearing member (not numbered) structured and arranged for coupling to the platform (not numbered), wherein said load bearing member comprises a first side and a second side; one of said first side or said second side comprises a plurality of side plates 12c,14c;

Art Unit: 3652

each said side plate having a centerline axis; and at least two adjacent side plates, each having a different thickness, on one of said first side or said second side are coupled together such that said centerline axis of each said side plate 12c, 14c are collinear.

If applicant feels that Westbrook as set forth above does not teach a work machine with load bearing members and a platform then the following rejection applies:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Walth by the teaching of Westbrook to have the sides made of adjacent plates coupled together on collinear centerlines in order to improve strength and to conform with standard manufacturing practice (column 1, Westbrook).

### ***Conclusion***

Applicant's arguments filed 9/10/04 have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Walth is not used as the teaching of relative yield strengths, this teaching is found in Liston.

Applicant argued that Liston does not teach relative yield strengths. However, relative yield strength is taught through relative hardness, as it is known that hardness and yield strength are related (see the definition Brinell Hardness).

Applicant argued that El Wakil does not teach weldments being simulated for effects of heat. However, El Wakil does teach throughout the reference the prior design and testing of weldments and the effects of the involved heating, and thus simulates the welding for the effects of heat.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is 703-305-1940. The examiner can normally be reached on 6:30am-4:30pm M,Tu,Th,F.

Art Unit: 3652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on 703-308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

msl

  
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